

REMARKS

Independent Claim 17 defines the invention as a method of performing a retrogression heat treatment process on a workpiece including the steps of providing a workpiece having a first portion and a second portion, and performing a retrogression heat treatment process on the workpiece in a continuous and longitudinal manner from the first portion of the workpiece to the second portion of the workpiece.

The admitted prior art discloses only that a closed channel structural member can be heat treated prior to the performance of a bending process so as to increase the ductility thereof, and further that such a heat treatment process can be a retrogression heat treatment process that is performed on the closed channel structural member, either in whole or in part. The admitted prior art does not show or suggest the claimed method of performing a retrogression heat treatment process on the workpiece in a continuous and longitudinal manner from the first portion of the workpiece to the second portion of the workpiece, as specifically claimed. Thus, as noted by the Examiner, the admitted prior art clearly falls short of the claimed invention.

To address this, the Examiner cites the Mills et al. reference to support the contention that it would have been obvious to a person of ordinary skill in the art to perform the known retrogression heat treatment process on the workpiece in a continuous and longitudinal manner from the first portion of the workpiece to the second portion of the workpiece. However, the Mills et al. reference is non-analogous art to the claimed invention and, therefore, should not even be considered.

A reference is non-analogous art if it (1) not within the field of endeavor of the claimed invention and (2) not reasonably pertinent to the particular problem that was being addressed by the invention. In this case, the Mills et al. reference is clearly not within the field of endeavor of the claimed invention, namely, methods for performing retrogression heat treatment processes. On the contrary, the Mills et al. reference relates to a hot working process, wherein the workpiece is deformed while it is at a relatively high temperature. In a hot working process, a metallic workpiece is initially heated to a relatively high temperature so as to cause it to become relatively soft and flexible. Then, while it remains at the relatively high temperature and in this relatively

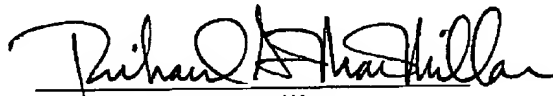
soft and flexible condition, the workpiece is deformed as desired. The claimed retrogression heat treatment process, on the other hand, is a cold working process, wherein the workpiece is deformed while it is at a relatively low temperature. In a retrogression heat treatment process, a metallic workpiece is rapidly heated to a relatively high temperature, then is rapidly cooled to a relatively low temperature. Notwithstanding the rapid cooling, the workpiece retains the full or partial softening characteristics for at least a relatively short period of time. It is during this relatively short period of time that the workpiece is deformed as desired. Thus, it can be seen that the hot working process disclosed in the Mills et al. reference is completely unrelated to the claimed cold working process. A person of ordinary skill in the art would not find the hot working process disclosed in the Mills et al. reference to have any reasonable relevance to the claimed cold working process. Thus, the disclosure of the Mills et al. reference is clearly not within the field of endeavor of the claimed invention.

Furthermore, the Mills et al. reference is also not reasonably pertinent to the particular problem that was being addressed by the invention. As discussed in the specification, the particular problem that was being addressed by the invention is how to adapt the retrogression heat treatment process for optimum efficiency in the manufacturing operation, such as in a high volume application as the manufacture of vehicular frame components. The heat treatment process described in the Mills et al. reference is designed to re-heat a previously heated portion of a workpiece so that it can be hot-worked at an elevated temperature. Thus, while the Mills et al. reference may be reasonably pertinent to prolonging the period of time in which a workpiece may be hot-worked at an elevated temperature, it is not at all relevant to the optimizing the process of subjecting a workpiece to a retrogression heat treatment process. Thus, the disclosure of the Mills et al. reference is clearly not reasonably pertinent to the particular problem that was being addressed by the invention. Accordingly, the disclosure of the Mills et al. reference should not be considered at all by the Examiner.

It is understood that the Examiner has cited the Mills et al. reference only to find support for the alleged obviousness of handling the workpiece in a longitudinally

reciprocating manner. However, it is inappropriate for the Examiner to dissect the reference in this manner. The Mills et al. reference discloses a hot working process wherein a heated workpiece is deformed until it becomes chilled, then is re-heated back to the hot working temperature for subsequent deformation. During these re-heating steps, the workpiece is handled in a longitudinally reciprocating manner. The claimed invention, however, relates to an improved method of performing a completely different process on a workpiece so as to allow a cold working process to be performed. Thus, the claims are clearly patentable over the art of record.

Respectfully submitted,



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